AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of conducting an assay, the method comprising:

providing a sample of cells in a chamber in a disc, the chamber including ~~at least one~~ a plurality of capture ~~zone~~ zones with a capture agent, the disc including at least one inlet port and a vent port on a first surface of the disc;

loading the disc into an optical reader which includes a detector and a trigger sensor;

rotating the disc so as to capture different cell types in different capture zones;

directing an incident beam of electromagnetic radiation to ~~the~~ at least one capture zone;

detecting by use of the detector at least one beam of electromagnetic radiation formed after interacting with the disc at the at least one capture zone;

detecting trigger information by use of the trigger sensor from a disc location that is separate from the ~~at least one~~ plurality of capture ~~zone~~zones, ~~wherein the disc includes information for controlling the rotation of the disc and information for processing the specific immunotyping assay to be conducted~~;

generating a trigger signal in response to the detected trigger information;

generating an output signal indicative of at least a portion of the at least one beam relating to captured cells;

processing at least a portion of the output signal in response to the trigger signal;

analyzing the at least a portion of the output signal to extract therefrom information relating to the number of cells captured at the at least one capture zone;

generating a count of the number of cells in each of the at least one capture zone; and

~~providing an output including the count~~graphically displaying in a plurality of distinct regions non-numeric representations of count information for different capture zones.

2. (Previously Presented) The method according to claim 1, wherein the chamber is internal to the disc and is bounded on opposite sides by a substrate and cap.

3. (Original) The method according to claim 1, wherein the optical disc is constructed with a reflective layer such that light directed to the capture zone and not striking a cell is reflected.

4. (Previously Presented) The method according to claim 1, wherein the optical disc is constructed such that light directed to the capture zone and not striking a cell is transmitted through the optical disc, the disc being between the light source and a detector.

5. (Previously Presented) The method according to any one of claims 1-5, wherein the disc surface is coated with a first group of cell capture agents.

6. (Previously Presented) The method according to claim 5, wherein the cell capture agents define a capture zone.

7. (Previously Presented) The method according to claim 6, wherein a second group of cell capture agents define a second capture zone.

8. (Currently Amended) The method according to claim 7, wherein the first and second ~~captures~~ capture zones are in one chamber.

9. (Original) The method according to claim 5, wherein the cell capture agents are for binding with cell surface antigen.

10. (Original) The method according to claim 9, wherein the cell surface antigen is selected from the CD family of antigens.

11. (Original) The method according to claim 10, wherein the cell surface antigen is selected from the group consisting of CD3, CD4, CD8, and CD45.

12. (Original) The method according to claim 1, further including:

directing the sample of cells into proximity with the cell capture agents;

incubating the cells in the presence of the capture agents; and

allowing the cells to specifically bind to the capture agents.

13. (Original) The method according to claim 12, further including analyzing the number of cells captured to thereby determine a cell concentration in the sample.

14. (Previously Presented) The method of claim 13, wherein the analyzing includes detecting sufficiently large changes in a level of light reflected from or transmitted through the disc.

15. (Original) The method of claim 13, wherein the analyzing includes using image recognition to count captured cells.

16. (Previously Presented) The method of claim 15, wherein the image recognition distinguishes one type of white blood cell from another.

17. (Currently Amended) The method of claim 1, wherein the ~~chamber has a~~ plurality of capture zones[[,]]each ~~having~~ have a different cell capture agent.

18. (Previously Presented) The method of claim 17, wherein the rotating includes rotating for a sufficient period of time at a sufficient speed so that the cells have an opportunity to bind with the capture agents.

19. (Original) The method of claim 18, wherein the rotating includes rotating for a sufficient period of time at a sufficient speed so that unbound cells are moved away from the capture zones.

20. (Original) The method of claim 19, wherein the rotating is done at a single speed.

21. (Original) The method of claim 17, further comprising counting ~~the~~ captured cells in each of the capture zones and providing an output including the counts.

22. (Previously Presented) The method of claim 21, wherein the output includes a ratio of CD4 to CD8 cells.

23-29. Cancelled.

30. (Previously Presented) The method of claim 12, wherein the analyzing includes detecting sufficiently large changes in the level of light reflected from or transmitted through the disc.

31. (Previously Presented) The method of claim 12, wherein the analyzing includes using image recognition to count captured cells.

32. (Previously Presented) The method of Claim 1, wherein the disc comprises a first layer of streptavidin, a second layer over the first layer, the second layer comprising a first antibody raised in a first species against a type of immunoglobulin of a second species, and a third layer over the second layer, the third layer comprising a second antibody raised in the second species against a cell surface antigen.

33. (Previously Presented) The method of Claim 1, wherein each of the capture zones are sequentially located in a fluid path between the inlet port and the vent port, and wherein capture zones are sequentially provided for CD4, CD8 and a control in relation to the fluid path.

34. (Previously Presented) The method of Claim 1, wherein the at least one beam comprises a first beam for detecting the trigger information and a second beam for interacting with the disc at the at least one capture zone.

35. (Previously Presented) The method of Claim 34, wherein the trigger sensor comprises a detector which is responsive to the first beam for detecting the trigger information.

36. (Previously Presented) The method of Claim 1, wherein the trigger information comprises a trigger mark in the disc.

37. (Previously Presented) The method of Claim 36, wherein the trigger mark is a window in the disc.

38. (New) The method of Claim 1 wherein graphically displaying comprises presenting a graphical representation of specific counts of cells for one of the different capture zones in each of the distinct regions.

39. (New) The method of Claim 1 wherein graphically representing comprises presenting bar graphs representing cell counts for the different capture zones to demonstrate relative numbers of cells.